AL260C-EVB-Main Board with AL240/242 Daughter Board

User Manual

Version 1.3

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REVISION HISTORY

Revision	Release Date	Summary
C1.0	2003/11/07	First release.
C1.2	2005/04/14	AL260 main board + AL242 decoder board
1.3	2005/11/24	AL260 main board + AL242/240 decoder board

1. Introduction

AL260 is an highly integration Video Enhancement Processor that supports video input with multiple video formats and video output with De-interlacing and Scaling effects .It can be used for most video conversion and processing applications.

Al260 is equipped with a high quality scaling engine that automatically maintains full screen output display, regardless of resolution of the incoming signals. Applying AverLogic's proprietary scaling algorithm, the primary input video can be scaled up and scaled down independently in horizontal &vertical directions. It also provides film detection, advanced motion adaptive de-interlacing, filtering, and scaling functions that are able to convert and process the interlaced video to be displayed on progressive panels.

AL260 is built-in 3-channel DAC for non-interlaced analog output. It also supports 24bit digital progressive- scan output. It is housed with 208-pin PQFP package.

2. Features

- ✓ Support ITU656/ ITU601 YUV video format input.
- ✓ Support Non-interlaced RGB/YPbPr Analog and 24bit R/G/B Digital outputs
- ✓ Film Detection with Inverse 3:2/2:2 Pull Down
- ✓ Advanced Motion Adaptive De-interlacing
- ✓ Independent Scale Up and Down in both Horizontal and Vertical direction
- ✓ Built-in LUT for Gamma Correction and Color Adjustment
- ✓ Dithering Logic for Color Depth Enhancement
- ✓ 2-Wire Serial Bus or Parallel Port Registers Access
- ✓ Built-in 2K Bytes OSD RAM and support External OSD Font ROM
- ✓ Frame capture Mirroring supported in Horizontal or Vertical direction
- ✓ NTSC/PAL video Input Auto-Detection supported

3. Package Contents

- ➢ AL260 EVB Board
- ➢ Connection Cables
- ➢ 12V/1A Power Adapter
- ➢ AL260 CD-ROM (optional)
- ➢ AL242 decoder board

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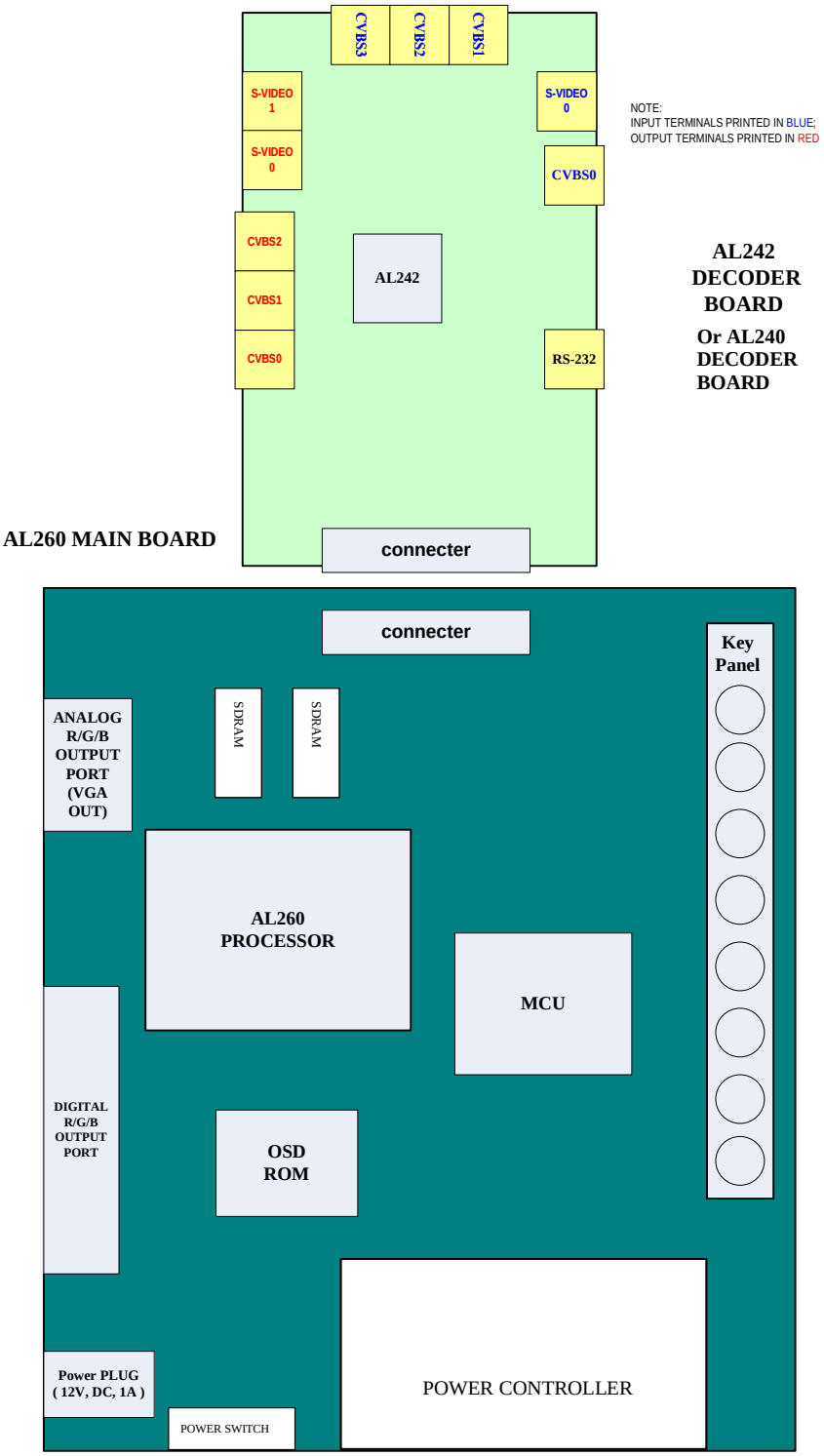
4. AL260 Main Board and AL242/240 Decoder Board Top View



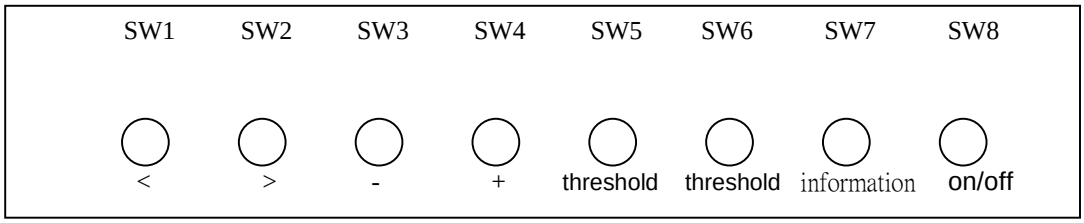
5. Hardware Installation

1. Make sure power switch at OFF position
2. Please plug in the 12V/1A power adapter.
3. Please plug in CVBS video, input signal.
4. Connect the VGA cable with a CRT/LCD monitor
5. Power on the system by turning on the power switch.

3. Keypad & Remote Controller Descriptions

There are 2 ways to control the EVB and Remote Controller. The descriptions are shown as follows:

(Keypad)



Button Number	Key Name	Function Descriptions
SW1	<	Item down
SW2	>	Item up
SW3	-	Value decrease
SW4	+	Value increase
SW5	threshold	Value – for MOTION and FILM
SW6	threshold	Value + for MOTION and FILM
SW7	information	information
SW8	Menu ON/OFF	Menu ON/OFF

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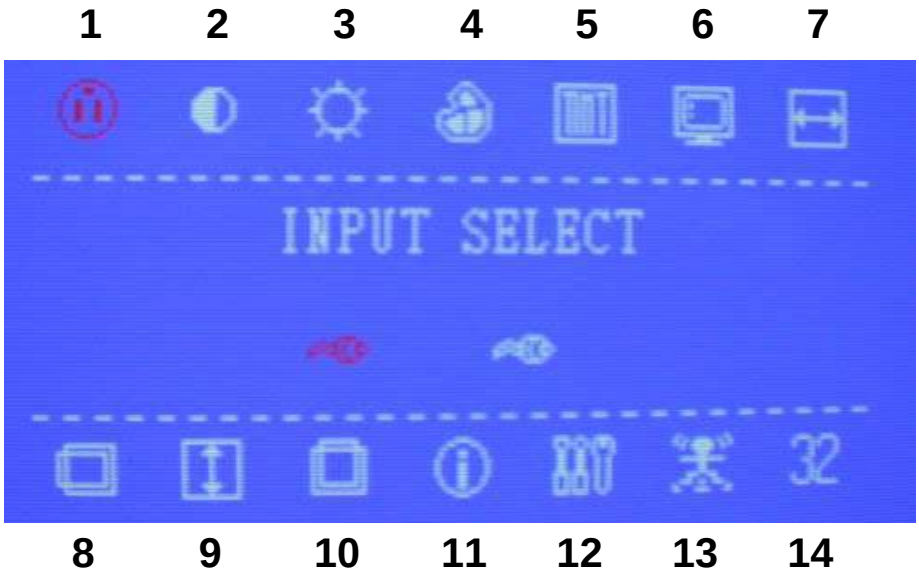
(Remote Controller)

1: UP indication.
2: Down indication.
3: Left indication.
4: Right indication.
5: Information.
6: Menu ON/OFF
7: Reset system to default setting(CVBS in). It takes about 5 seconds & shows processing message.
8: Force to turn OSD menu off.
9: Fast to switch input(CVBS0 -> CVBS1 ->) sequentially.
NUM.: Input 01~19 to switch current output timing to corresponding one. (see appendix A : output timing chart)

4. Operation Menu

7.1 Main Menu

In normal display mode, press button “<”, “>” or “Menu”, it will invoke main menu. There are 14 functions in the main menu mode: INPUT SELECT, CONTRAST, BRIGHTNESS, SATURATION, TINT, OUTPUT TIMING, H ZOOM, H PHASE, V ZOOM, V PHASE, INFORMATION, TV UTILITY, MOTION, and FILM in the main OSD menu. Please refer to the button function assignments as follows:



1. INPUT SELECT
2. CONTRAST
3. BRIGHTNESS
4. SATURATION
5. TINT
6. OUTPUT TIMING
7. H ZOOM
8. H PHASE
9. V ZOOM
10. V PHASE
11. INFORMATION
12. TV UTILITY
13. MOTION
14. FILM

7.2 Icon Function Introduction

7.2.1 INPUT SELECT, CONTRAST, BRIGHTNESS, SATURATION, TINT, H ZOOM, H PHASE, V ZOOM, V PHASE, MOTION, FILM

Press “+/-“ button to change the setting values directly.

7.2.2 OUTPUT TIMING

Press “+/-“ button to choose output format and timing and then press “Enter” key.

Please be noted that AL260EVB only supports RGB (VGA) output at this stage.

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Appendix A

Timing No.	Description	Fh	Sync Pol	Fv	Sync Pol
1	640x480@60	31.469	-	59.940	-
2	640x480@72	37.861	-	72.809	-
3	640x480@75	37.500	-	75.000	-
4	720x400@85	37.927	-	86.039	+
5	640x480@85	43.269	-	85.008	-
6	800x600@56	35.156	+	56.250	+
7	800x600@60	37.879	+	60.317	+
8	800x600@72	48.077	+	72.188	+
9	800x600@75	46.875	+	75.000	+
10	800x600@85	53.674	+	85.061	+
11	1024x768@60	48.363	-	60.004	-
12	1024x768@70	56.476	-	70.069	-
13	1024x768@75	60.023	+	75.029	+
14	1024x768@85	68.677	+	84.997	+
15	1280x1024@60	63.981	+	60.020	+
16	640x400@70	31.469	-	70.086	+
17	640x350@70	37.469	+	70.086	-
18	720x350@70	31.469	+	70.086	-
19	1280x768@60	48.363	+	60.004	+

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